

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A high emissivity radiator comprising a substrate, an amorphous carbon layer formed on a radiating surface of the substrate, and a metallic carbide-forming carbide layer interposed between the substrate and the amorphous carbon layer and a protective layer formed on the amorphous carbon layer.
2. (Currently Amended) The radiator of claim 1, wherein the metallic carbide-forming carbide layer comprises titanium.
3. (Currently Amended) The radiator of claim 1, wherein the amorphous carbon layer and/or the ~~titanium~~ carbide layer has a thickness in the range of 0.1 micrometres to 1.0 micrometres.
4. (Cancelled).
5. (Currently Amended) The radiator of claim [[4]] 1, wherein the protective layer is substantially transparent to infrared radiation.

6. (Previously Presented) The radiator of claim 5, wherein the protective layer comprises at least one of SiC, SiO₂, diamond and diamond-like carbon.

7. (Currently Amended) A method of making a radiator having an emissivity of at least 30% for radiation of wavelength in the range of 3 μ m to 5 μ m, the method comprising the steps of forming of:

providing a substrate having a radiating surface; forming a metallic carbide-forming layer on a substrate the radiating surface; [[and]]

forming an amorphous carbon layer on and in contact with the metallic carbide-forming layer; and

forming a protective layer on the amorphous carbon layer.

8. (Original) The method of claim 7, wherein the amorphous carbon layer and/or the metallic carbide forming layer is formed by sputter deposition or evaporation.

9. (Cancelled).

10. (Currently Amended) The method of claim [[7]] 1, wherein the radiator is annealed after the steps of forming the metallic carbide-forming and amorphous carbon layers.

11. (Cancelled)

12. (Cancelled)

13. (Currently Amended) A radiator comprising: a substrate[[,]]; a soft amorphous carbon layer formed on the substrate; and a metallic carbide layer interposed between the substrate and the amorphous carbon layer layer, wherein the metallic carbide layer is in contact with the amorphous carbon layer.

14. (Previously Presented) The radiator of claim 13, being a high emissivity radiator.

15. (Previously Presented) The radiator of claim 13 wherein the amorphous carbon layer is an annealed amorphous carbon layer.

16. (Currently Amended) A method of making a radiator comprising the steps of providing a metallic carbide-forming layer on a substrate; and forming a soft amorphous carbon layer on and in contact with the metallic carbide-forming layer.

17. (Previously Presented) The method of claim 16 wherein the radiator is a high-emissivity radiator.

18. (Currently Amended) The method of claim 16 wherein the metallic carbide-forming layer is provided as [[on]] an integral surface layer of the substrate.

19. (Previously Presented) The method of claim 16 wherein the metallic carbide-forming layer is provided as a separate layer on a surface of the substrate.

20. (Currently Amended) The radiator of claim 2, wherein the amorphous carbon layer and/or the ~~titanium carbide~~ layer has a thickness in the range of 0.1 micrometres to 1.0 micrometres.

21. (Cancelled).

22. (Currently Amended) The radiator of claim [[2]] 13, wherein the ~~amorphous carbon carbide~~ layer is protected by a protective layer comprises titanium.

23. (Currently Amended) The method of claim [[8]] 7, wherein the radiator is annealed after the steps of forming the ~~metallic carbide-forming and~~ amorphous carbon [[layers]] layer.

24. (Currently Amended) The method of claim [[9]] 16, wherein the radiator is annealed after the steps of forming the ~~metallic carbide-forming and~~ amorphous carbon [[layers]] layer.

25. (New) The radiator of claim 1, wherein the radiator has an emissivity of at least 30% for radiation of wavelength in the range of 3 μ m to 5 μ m.